



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,950	08/13/2004	Hui-Min Lai	22171-00020-US1	4949
30678 7590 05/15/2007 CONNOLLY BOVE LODGE & HUTZ LLP P.O. BOX 2207 WILMINGTON, DE 19899-2207			EXAMINER PHAM, VAN T	
			ART UNIT 2627	PAPER NUMBER
			MAIL DATE 05/15/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/710,950

Applicant(s)

LAI ET AL.

Examiner

VAN T. PHAM

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

Response to Arguments

1. Applicant's arguments filed 03/01/2007 have been fully considered but they are not persuasive.

Applicant's asserted "Figure 5 of Sheu et al. shows a compensator device 98 and a adaptive compensator 100 for keeping the relation between the actuator 72 and the sled 68. The signals from the compensation device 98 and the adaptive compensator 100 are combined before entering the driving device 70. In other words, there is only one signal continuously entering the driving force 70, so that the signal is not "intermittently" or "selectively" provided to the driving device to drive the sledge.", which is incorrect. Claim 1 recites a first sledge signal, and a second sledge signal based on the first sledge signal.....intermittently driving a sledge of the optical disk drive by the second sledge driving signal to perform error compensation. There is one signal here, which has only one signal to chose from which is *driving a sledge of the optical disk drive by the second sledge driving signal to perform error compensation.*

Moreover, Applicant's asserted, "In addition, FIG. 6 of Sheu et al. shows the same feature. In step 216, the driving force and the supplementary force are combined. In other words, there is only one control signal to control the driving device", which is true, because claim one recites only one signal.

Also, Applicant's asserted "Further, Sheu et al. fails to disclose "a microprocessor configured to generate a second sledge driving signal in response to a magnitude of one or more signals selected from the group consisting of the first sledge driving signal and the error signal, wherein the microprocessor is further configured to control the second sledge driving signal so as

Art Unit: 2627

to intermittently drive a sledge of the optical disk drive", as recited in independent claim 8, as amended. Which is similar to the response above.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation is found on Kawada col. 2, motivation being in order to control a signal representing a servo loop on signal. Moreover, Applicant's asserted, "to establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference must teach or suggest all the claim limitations. Further, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. Whether or not Kawada et al. teaches that for which the Examiner's offers it, Kawada et al. does not make up for the previously identified deficiencies of Sheu et al., as discussed above with respect to independent claims 1 and 8, from which dependent claims 4 and 9-10 variously depend", which is incorrect. The motivation is found on Kawada col. 2, motivation being in order to control a signal representing a servo loop on signal.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-2, 5-6, 8, 11, 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Sheu et al. (US 6,717,892).

Regarding claim 1, Sheu discloses an error compensation method for an optical disk drive, comprising the steps of: detecting an error signal showing the deviation of a focal point from a track of the optical disk drive (see Fig. 5, element 78 and col. 4, line 54-col. 5, line 25)); generating a first sledge driving signal based on the error signal showing the deviation of the focal point (see Fig. 5, element 98, 100); generating a second sledge driving signal based on the magnitude of the error signal or the first sledge driving signal (see Fig. 5, elements 88, 98, 100, 70); and intermittently driving a sledge of the optical disk drive by the second sledge driving signal to perform error compensation (see col. 5 and Fig. 5).

Regarding claim 2, Sheu discloses the error compensation method for an optical disk drive in accordance with claim 1, further comprising the step of detecting error signals between an actuator and the sledge of the optical disk drive (see col. 5).

Regarding claim 5, Sheu discloses the error compensation method for an optical disk drive in accordance with claim 1, further comprising the step of filtering the error signal smaller than a preset threshold value (see Fig. 6).

Regarding claim 6, Sheu discloses the error compensation method for an optical disk drive in accordance with claim 1, wherein the magnitude of the second sledge driving signal is proportional to that of the error signal or the first sledge driving signal (see cols. 5-6 and Fig. 6).

Regarding claim 8, see rejection above of claim 1.

Regarding claim 11, Sheu discloses the error compensation apparatus for an optical disk drive in accordance with claim 8, wherein the error signal further comprises an error signal between an actuator and the sledge of the optical disk drive (see Fig. 5).

Regarding claim 13, the apparatus of claim 8, further comprising means for driving the sledge with the second sledge driving signal (see Fig. 5).

4. Claims 1, 3, 6-8, 10-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen (US 2004/0136282).

Regarding claim 1, Chen discloses an error compensation method for an optical disk drive, comprising the steps of:

detecting an error signal showing the deviation of a focal point from a track of the optical disk drive (see Fig. 4, elements 11, 14);

generating a first sledge driving signal based on the error signal showing the deviation of the focal point (see Fig. 5, element 17);

generating a second sledge driving signal based on the magnitude of the error signal or the first sledge driving signal (see Figs. 4, 7, elements 18-19); and

intermittently driving a sledge of the optical disk drive by the second sledge driving signal to perform error compensation (see Fig. 4, elements 20, S1, S2).

Regarding claim 3, Chen discloses the error compensation method for an optical disk drive in accordance with claim 1, wherein the first and second sledge driving signals alternately drive the sledge of the optical disk drive for error compensation (see Fig. 4).

Regarding claim 6, discloses the error compensation method for an optical disk drive in accordance with claim 1, wherein the magnitude of the second sledge driving signal is proportional to that of the error signal or the first sledge driving signal (see Fig. 7).

Regarding claim 7, discloses the error compensation method for an optical disk drive in accordance with claim 1, further comprising the step of dividing the error signal or the first sledge driving signal into segments based on magnitude thereof, wherein the second sledge driving signal generated from the error signal or the first sledge driving signal in the same segment has the same voltage (see Fig. 7).

Regarding claim 8, see rejection above of claim 1.

Regarding claim 10, discloses the error compensation apparatus for an optical disk drive in accordance with claim 8, wherein further comprising a switch for intermittent by transmitting either the first sledge driving signal or the second sledge driving signal to the sledge of the optical disk drive (see Fig. 4).

Regarding claim 11, discloses the error compensation apparatus for an optical disk drive in accordance with claim 8, wherein the error signal further comprises an error signal between an actuator and the sledge of the optical disk drive (see Fig. 5).

Regarding claim 12, discloses the method of claim 1, wherein the first and second sledge driving signals selectively drive the sledge of the optical disk drive (see Fig. 4).

Regarding claim 13, the apparatus of claim 8, further comprising means for driving the sledge with the second sledge driving signal (see Fig. 4).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over sheu et al. (US 6,717,892) in view of Kawada et al. (6,603,717).

Claims 4 and 9:

Sheu discloses the error compensation method for an optical disk drive in accordance with claim 1, wherein the second sledge driving signal is employed to drive the sledge of the optical disk drive.

Kawada discloses a sledge driving signal is employed to drive a sledge of the optical disk drive when a clock signal is at high level (see Fig. 1, elements 11).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a sledge driving signal is employed to drive a sledge of the optical disk drive when a clock signal is at high level in Sheu as suggested by Kawada, the

motivation being in order to control a signal representing a servo loop on signal (see Kawada col. 2).

Regarding claim 9, see rejection above of claim 4.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Cited References

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The cited references relate to a method for detecting the speed of a sledge motor in an optical storage device; a method for calibrating center error offset in an optical drive and control system capable of calibrating center error offset; and a method for detecting running speed of sledge motor in optical storage device.

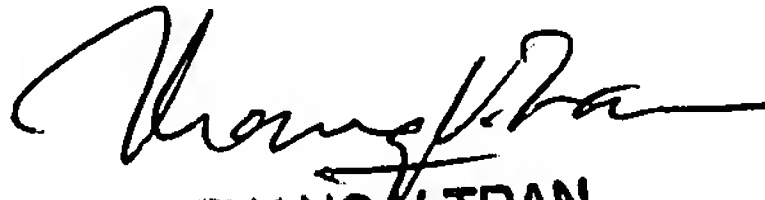
Art Unit: 2627

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VAN T. PHAM whose telephone number is 571-272-7590. The examiner can normally be reached on Monday-Thursday from 9:00 am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VP


THANG V. TRAN
PRIMARY EXAMINER